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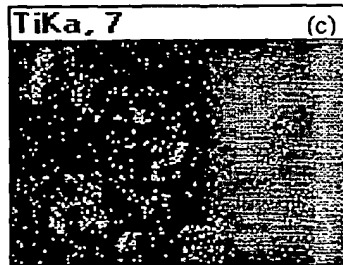
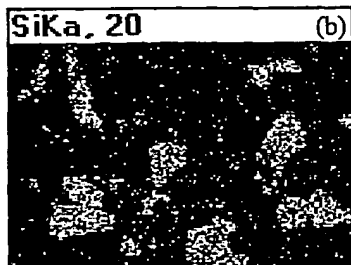
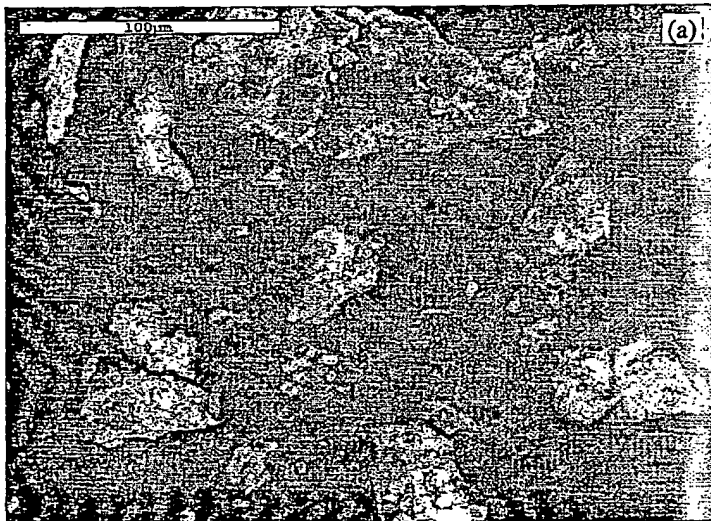
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(54) Title: **METHOD AND A COMPOSITE FOR MERCURY CAPTURE FROM FLUID STREAMS**



(57) Abstract: A method for removing mercury from a fluid stream includes the steps of providing a porous composite material comprising a substrate and a plurality of catalyst and/or photocatalyst particles, and contacting substrate with a fluid stream. The porous composite material adsorbs and/or then oxidizes or reduces metallic species including elemental mercury. A fossil fuel fired power plant can include an emission control device comprising the porous composite material to filter flue gas to and thereby minimize mercury emissions into the environment.